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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/750,363
Filing Date: December 31, 2003
Appellant(s): BHARAT ET AL.

John C. Pokotylo
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 12, 2010 appealing from the Office action

mailed on November 10, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by

name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings

which will directly affect or be directly affected by or have a bearing on the Board's decision in

the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

1, 3, 5-26, 33, 35, 37-58 and 65-66.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments

after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in

the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to

be reviewed on appeal. Every ground of rejection set forth in the Office action from which the

appeal is taken (as modified by any advisory actions) is being maintained by the examiner except

for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW

GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the

Appendix to the appellant's brief.

(8) Evidence Relied Upon

| 5754939 | Herz et al. | 05-1998 |
| 5724567 | Rose et al. | 03-1998 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

   rejections set forth in this Office action:

   A patent may not be obtained though the invention is not identically disclosed or described as
   set forth in section 102 of this title, if the differences between the subject matter sought to be
   patented and the prior art are such that the subject matter as a whole would have been
   obvious at the time the invention was made to a person having ordinary skill in the art to
   which said subject matter pertains. Patentability shall not be negatived by the manner in
   which the invention was made.

2. Claims 1, 3, 5-2633, 35, 37-58 and 65-66 are rejected under 35 U.S.C. 103(a) as being

   unpatentable over Herz et al. (U.S 5,754,939) ("Herz"), in view of Rose et al. (U.S 5724567)

   ("Rose").

3. As per claims 1, 3, 5-2633, 35, 37-58 and 65-66, Herz et al. discloses a computer system for
   evaluating customer and document/object profiles to automatically generate "target profiles"
   that most likely will interest the user. The computer system comprises apparatus with means
   (column 28, lines 43-67, columns 29, 30, figures 1 and 2) to do the following:

   A. Herz includes the appropriate hardware/software combination (C28, L47-67) enabling the
      steps below;

   B. ("determining, with a computer system including at least one computer on a network,
      initial user profile information for the user using information included in past search
      queries submitted to a search engine by the user, wherein such information is
      independent of documents returned as search results to the past search queries;") –
      (Determining user profile attributes such as age and zip code (physical location) (column
      4, lines 54-55). The prior art also teaches that the user profile is determined based on the
      user's search query and not the actual result of the search, C66, L57-67);

   C. ("inferring, with the computer system, user profile information for the user;") –
      According to Merriam-Webster's dictionary, the word "infer" has the following
      definitions: 1 : to derive as a conclusion from facts or premises <we see smoke and infer
      fire — L. A. White> — compare imply, 2 : **guess**, surmise <your letter…allows me to
      infer that you are as well as ever — O. W. Holmes 1935>, 3 a : to involve as a normal
      outcome of thought b : to point out : indicate <this doth infer the zeal I had to see him —
      Shakespeare> <another survey…infers that two-thirds of all present computer
      installations are not paying for themselves — H. R. Chellman>, 4 : **suggest**, hint <are you
      inferring I'm incompetent?>. For the purpose of examination, the word "infer" is being

interpreted synonymously with guess or suggest. As such, the prior art can "guess" the

user's likes or dislikes based on the user's search profile, C5, L21-25. Additionally, the

prior art can actively generate a user's interest or passively infer a user interest in subject,

C17, 33-35;

D. ("determining, with the computer system, the user profile information for the user using

both the initial user profile information and the inferred user profile information;") –

(Determining both user profile such as age, and inferred user interest C4, L54-60);

E. ("controlling, with the computer system~ the serving of an advertisement to the user

using the determined user profile information") – The ability to match user's interests

with advertisement, C7, L4-10;

F. Regarding "defining a node for each of a number of documents and the user…", "adding

edges between nodes…" and "inferring user profile information of the user using a

topology of the graph…", figures 3-4 of Herz shows the aspect of nodes (i.e., p, B, C, D)

and edges or lines between the nodes, similar to the structure found in figure 10, item

1070 of appellant's invention. However, Hertz did not explicitly teach that the nodes are

users and documents, with lines or connectors (edges) between them when there is an

association between the user and the document. Figure 5B of Rose shows the graphing of

documents and users. Figures 6 show a table representation of documents and users,

where one of ordinary skill in the art could easily show a graphical representation of the

table in figure 6.

G. According to Rose, "each user profile also comprises a vector, based upon the user's

indications as to his relative interest in previously retrieved documents. Each time a user

provides a new response to a retrieved message, the profile vector is modified in accordance with the results of the indication. For example, if the user indicates interest in a document, all of the significant terms in that document can be given increased weight in the user's profile "(col. 6, lines 28-35). "A score of the document's relevance can be indicated by the cosine of the angle between that document's vector and the user's profile vector. A document having a vector which is close to that of the user's profile, such as Document 4, will be highly ranked, whereas those which are significantly different will have a lower ranking, for example Document 1" (col. 6, lines 55-60, Fig. 5B).

H. Therefore, it would have been obvious for one skilled in the art to have a system that have graphical representation of users and/or document. The motivation for one skilled to use graph would be to establish relationships between the user and document.

I. ("determining initial user profile information for the user using information included in past search queries submitted to a search engine by the user, wherein such information is independent of documents returned as search results to the past search queries;") --The system also stores profiles of documents which enables a user to access target objects of relevance and interest to the user without requiring the user to expend an excessive amount of time and energy (column 4, lines 35-42) – User profiles determined from past searches submitted by user (column 4, lines 58-61);

J. ("the initial user profile includes a plurality of attributes, each of the plurality of attributes having a value and a score") --Attributes having values (column 10, lines 8-9, line 52, column 12, line 58) and scores (column 12, lines 60-67, column 13, lines 1-9).

The score represents the frequency in which a particular attributes appears in a document. Thus, the score represents the likelihood of particular attribute being correct;

K. Re: claims 7, 20, 39, 52, the prior art teaches that a node being examined as a device that is connected, as part of a computer network and the way data is stored in those devices so that it can be used efficiently. Herz shows the aspect of nodes (i.e., p, B, C, D) and edges or lines between the nodes, similar to the structure found in figure 10, item 1070 of appellant's invention. However, Hertz did not explicitly teach that the nodes are users and documents, with lines or connectors (edges) between them when there is an association between the user and the document. Figure 5B of Rose shows the graphing of documents and users. Figures 6 show a table representation of documents and users, where one of ordinary skill in the art could easily show a graphical representation of the table in figure 6.

L. Getting user profiles determined from past searches submitted by user (column 4, lines 58-61) – ("the act of determining an initial user profile information for the user further uses past document selections by the user")

M. The system can relate a user with past searches words such past interest in films whose review text (attribute h) contains words like "chase," "explosion," "explosions," "hero," "gripping," and "superb" (column 10, lines 37-42). The system can also record **associations** between documents (movies) and **users** column 10, lines 43-46). A good indication that the user wants to rent a particular movie is that the user has previously rented other movies with similar attribute values. For example, if the user has often liked movies that customer 1 and customer 2 have rented, then the user may like other such

movies. Since the system can system relationships between users and documents one

skilled in the art could easily infer from these relationships to create graphs (column 10,

lines 46-53). With regard to the aspect of "(adding edges between nodes, <u>if</u> there is an

association between the nodes to define a graph,") can be interpreted as equivalent to "not

adding edges between nodes, if there is no association. Therefore, that limitation does

not have to happen, and can be interpreted as such;

N. ("inferring user profile information for the user using a topology of the graph and

user")Mapping/graphing a user target profile interest summary indicative of said user's

access patterns to target objects and sets of target object characteristics to said user

pseudonym (C79, L8-10);

O. Attributes are multiplies by a weight, a weighted attributes are added together (column

18, lines 63-67, column 19, lines 1-7);

P.   The system gathers documents with similar profiles, based on their content. In this case,

the system gets information about intrinsic properties of users and/or documents (column

23, lines 55-65);

Q. System using document meta data (column 11, lines 4-15);

(10) Response to Argument

Response to Arguments

1.   Appellant's arguments filed on November 10, 2010 have been fully considered but they

are not persuasive.

2.   **Appellant argues**: The prior art does not teach determining user profile, based on past

queries. Instead the prior art teaches user information, based on a single query (Brief, pages 14-

15).

3.   **Examiner Response**: The Examiner disagrees. Specifically, par. 69, C45-56 of Herz

teaches the aspect of past queries being used to access user information.

4.   **Appellant argues**: The prior art does not teach nodes and edges being used to infer user

profile.

5.   **Examiner Response**: According to Rose, "each user profile also comprises a vector,

based upon the user's indications as to his relative interest in previously retrieved documents.

Each time a user provides a new response to a retrieved message, the profile vector is modified

in accordance with the results of the indication. For example, if the user indicates interest in a

document, all of the significant terms in that document can be given increased weight in the

user's profile "(col. 6, lines 28-35). "A score of the document's relevance can be indicated by the

cosine of the angle between that document's vector and the user's profile vector. A document

having a vector which is close to that of the user's profile, such as Document 4, will be highly

ranked, whereas those which are significantly different will have a lower ranking, for example

Document 1" (col. 6, lines 55-60, Fig. 5B).

6.   **See attached claim chart -**

         (11) Related Proceeding(s) Appendix

         No decision rendered by a court or the Board is identified by the examiner in the Related

Appeals and Interferences section of this examiner's answer.

         For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/EVENS J. AUGUSTIN/

Primary Examiner, Art Unit 3621

Conferees:

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